

Listing of Claims:

1. (original) A kind of yarn of animal collagen fiber, comprising 1-100 WT% of dispersing collagen fiber derived from leathers or/and animal skins, and 0-99 WT% of textile fiber, said collagen fiber and textile fiber being twisted together.
2. (original) The yarn of animal collagen fiber according to claim 1, wherein the collagen fiber is derived from at least one kind of animals including cattle, sheep, horses, dogs, pigs, deer, rabbits, crocodiles and snakes.
3. (original) The yarn of animal collagen fiber according to claim 1, wherein the textile fiber is at least one of natural fibers and synthetic fibers including cotton, hemp, wool, silk, terylene, acrylic, nylon, polyamide and viscose staple.
4. (original) A process for manufacturing the yarn of animal collagen fiber of claim 1, comprising the following steps: choosing tanned leather materials, loosing fibers, assorting, blending, carding, drawing and twisting, wherein an opener is used to loose fibers.
5. (original) A process for manufacturing the yarn of animal collagen fiber of claim 1, the process comprising the following steps: choosing rawhide materials, liming, washing with water, deliming, tanning and softening, dehydrating, loosing fibers, assorting, blending, carding, drawing, and twisting, wherein acid protease is used for deliming, and the pH value in the solution is controlled between 3 and 6.

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6. (new) The process of claim 4, Wherein the fibers are loosened by a reciprocating liquid opener having a container and at least a beater, the liquid in the liquid opener is water, at least one of 0.2-2 percent (by weight of water) washing agent, 1-10 percent (by weight of water) lipid and product thereof, 0.2-1.5 percent (by weight of water) penetrating agent and 0.03-0.5percent (by weight of water) basic substances is added into water in the liquid opener, the beater to make the adhesive substances such as fiber matrix among the collagen fibers become lubricating agent again under the effect of the liquid and make the materials expanding.

7. (new) The process of claim 4, wherein the loosened dispersing collagen fibers are separated by wind, longer fibers are distributed into a different zone from that of the shorter fibers by the function of airflow, then assorting according to the length of the fibers.

8. (new) The process of claim 4, wherein a multi-layer cotton mixing machine or a method for spreading horizontally and taking directly can be used to blend for the blending step.

9. (new) The process of claim 4, wherein in the carding step a carding machine to make the bunchy collagen fibers and textile fibers form continuous fiber assemble with a particular linear density which is homogeneously blended and arrayed orderly in longitudinal direction.

10. (new) The process of claim 4, wherein in the drawing step, a drawing machine is used to draw and level fibers one to three times, each fiber is continuously extended to

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achieve the object for improving the uniformity of the fibers.

11. (new) The process of claim 4, wherein select different roller, abrasion, ring for different diameter and length of the yarns.

12. (new) The process of claim 5, wherein the liming step uses calcium hydroxide as the primary ingredient, adding 1--3 percent(weight of rawhide) sodium sulfate and 0.1-0.5percent sodium hydroxide, water is 1.5-2 times that of the rawhide, the temperature for the liming solution is at 30-50 centigrade, and the time for soaking is 2-24 hours.

13. (new) The process of claim 5, wherein for the washing step saponified mixtures are cleaned by ambient water at 30-40 centigrade, followed by washing with ambient water one to two times to make the pH value between 6.5-8.

14. (new) The process of claim 5, wherein for the deliming step, adding 2--3percent (by weight of hide) ammonium sulfate, 0.2-0.5 percent protease and 1-2 times of water, soaking alternated with rolling at pH value between 3 and 6, and at the temperature between 35 and 40 centigrade for 1- 2 hours to removing basic ions in hide and simultaneously further hydrolyze the fiber matrix of rawhide, fat and non-fiber protein, then the impurities are removed with water, for the hide with furs, 3-4 percent (by weight of hide) alkali sulphide including 10-15 percent lime paste , 1-2 percent sodium hydroxide and 1 -2 times of water, is added before liming, the furs are taken off from the hide when dipping for 2-16 hours, and then removed by washing.

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15. (new) The process of claim 5, wherein for the tanning and softening step, the chrome tanning method or plant tanning method and other organic or mineral tanning method in the current technology is performed in the opener to make the hide reciprocating torn while tanned so that the collagen fibers are basically loosened, after tanned, the resulting raw materials are softened by emulsifiable solution and lipid to prevent from cohesion after dehydration.

16. (new) The process of claim 5, wherein a wringing machine is used to make water content between 20-30 percent.

17. (new) The process of claim 5, wherein for the Loosing fibers step using a trapeziform opener or a gill box rotary opener or a cutting machine with three cylinders.